

*Amendment and Response*

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Serial No.: 10/087,617

Confirmation No.: 7945

Filed: February 27, 2002

For: METHODS FOR GROWTH STIMULATION

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**Amendments to the Claims**

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

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1. (Currently amended) A method for exposing an embryo to light, the method comprising exposing an egg to a monochromatic light for a photoperiod comprising a light period and dark period, wherein the monochromatic light has an intensity of at least about 0.001 watts/m<sup>2</sup> to no greater than about 0.2 watts/m<sup>2</sup>.
2. (Original) The method of claim 1 wherein each light period and each dark period are each independently at least about 3 minutes.
3. (Original) The method of claim 1 wherein each light period and each dark period are each independently at least about 15 minutes.
4. (Original) The method of claim 1 wherein each light period comprises a period of about 3 to about 15 minutes, and wherein each dark period comprises a period of about 3 to about 15 minutes.
5. (Original) The method of claim 1 wherein the monochromatic light comprises a peak wavelength of at least about 500 nanometers (nm) to no greater than about 590 nm.
6. (Original) The method of claim 1 wherein the monochromatic light comprises a peak wavelength of at least about 550 nm to no greater than about 570 nm.
7. (Canceled)

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8. (Original) The method of claim 1 wherein the egg is a chicken egg or a turkey egg.

9-10. (Canceled)

11. (Previously Amended) A method for exposing an embryo to light, the method comprising exposing an egg to a monochromatic light for a photoperiod comprising a light period and dark period, wherein each light period and each dark period are each independently at least about 3 minutes, wherein the monochromatic light comprises a peak wavelength of about 560 nm, half band +/- about 15 nm, and wherein the monochromatic light has an intensity of at least about 0.08 watts/m<sup>2</sup> to no greater than about 0.2 watts/m<sup>2</sup>.

12. (Original) A method for increasing a bird's weight, the method comprising:  
    exposing an egg to a monochromatic light for a photoperiod; and  
    hatching the egg, wherein the bird that hatches from the egg has a greater weight at about 28 days after hatching compared to a bird that hatches from an egg not exposed to the monochromatic light.

13. (Previously Amended) The method of claim 12 wherein the photoperiod comprises a light period and a dark photoperiod.

14. (Original) The method of claim 13 wherein each light period and each dark period are each independently at least about 3 minutes.

15. (Original) The method of claim 13 wherein each light period and each dark period are each independently at least about 15 minutes.

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16. (Original) The method of claim 13 wherein each light period comprises a period of about 3 to about 15 minutes, and wherein each dark period comprises a period of about 3 to about 15 minutes.

17. (Original) The method of claim 12 wherein the monochromatic light comprises a peak wavelength of at least about 500 nm to no greater than about 590 nm.

18. (Original) The method of claim 12 wherein the monochromatic light comprises a peak wavelength of at least about 550 nm to no greater than about 570 nm.

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19. (Original) The method of claim 12 wherein the monochromatic light has an intensity of at least about 0.001 watts/m<sup>2</sup> to no greater than about 0.2 watts/m<sup>2</sup>.

20. (Original) The method of claim 12 wherein the egg is a chicken egg or a turkey egg.

21. (Canceled)

22. (Original) A method for increasing a bird's weight, the method comprising:  
    exposing an egg to a monochromatic light for a photoperiod comprising a light period and a dark period, wherein the monochromatic light comprises a peak wavelength of at least about 550 nm to no greater than about 570 nm; and  
    hatching the egg, wherein the bird that hatches from the egg has a greater weight at about 28 days after hatching compared to a bird that hatches from an egg not exposed to the monochromatic light.

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23. (Original) A method for increasing a bird's weight, the method comprising:

exposing an egg to a monochromatic light for a photoperiod comprising a light period and a dark period, wherein each light period and each dark period are each independently at least about 3 minutes, and wherein the monochromatic light comprises a peak wavelength of at least about 550 nm to no greater than about 570 nm; and

hatching the egg, wherein the bird that hatches from the egg has a greater weight at about 28 days after hatching compared to a bird that hatches from an egg not exposed to the monochromatic light.

24. (Original) A method for increasing a bird's weight, the method comprising:

exposing an egg to a monochromatic light for a photoperiod comprising a light period and a dark period, wherein each light period and each dark period are each independently at least about 3 minutes, wherein the monochromatic light comprises a peak wavelength of about 560 nm, half band +/- about 15 nm, and wherein the monochromatic light has an intensity of at least about 0.08 watts/m<sup>2</sup> to no greater than about 0.2 watts/m<sup>2</sup>; and

hatching the egg, wherein the bird that hatches from the egg has a greater weight at about 28 days after hatching compared to a bird that hatches from an egg not exposed to the monochromatic light.

25. (Original) A method for increasing muscle weight in a bird, the method comprising:

exposing an egg to a monochromatic light for a photoperiod; and

hatching the egg, wherein the bird that hatches from the egg has greater muscle weight at about 28 days after hatching compared to a bird that hatches from an egg not exposed to the monochromatic light.

26. (Previously Amended) The method of claim 25 wherein the photoperiod comprises a light period and a dark photoperiod.

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27. (Original) The method of claim 26 wherein each light period and each dark period are each independently at least about 3 minutes.
28. (Original) The method of claim 26 wherein each light period and each dark period are each independently at least about 15 minutes.
29. (Original) The method of claim 26 wherein each light period comprises a period of about 3 to about 15 minutes, and wherein each dark period comprises a period of about 3 to about 15 minutes.
30. (Original) The method of claim 25 wherein the monochromatic light comprises a peak wavelength of at least about 500 nm to no greater than about 590 nm.
31. (Original) The method of claim 25 wherein the monochromatic light comprises a peak wavelength of at least about 550 nm to no greater than about 570 nm.
32. (Original) The method of claim 25 wherein the monochromatic light has an intensity of at least about 0.001 watts/m<sup>2</sup> to no greater than about 0.2 watts/m<sup>2</sup>.
33. (Original) The method of claim 25 wherein the egg is a chicken egg or a turkey egg.
34. (Canceled)
35. (Original) The method of claim 25 wherein the muscle is breast muscle.
36. (Original) A method for increasing muscle weight in a bird, the method comprising:

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exposing an egg to a monochromatic light for a photoperiod comprising a light period and a dark period, wherein the monochromatic light comprises a peak wavelength of at least about 550 nm to no greater than about 570 nm; and

hatching the egg, wherein the bird that hatches from the egg has greater muscle weight at about 28 days after hatching compared to a bird that hatches from an egg not exposed to the monochromatic light.

37. (Original) A method for increasing muscle weight in a bird, the method comprising:

exposing an egg to a monochromatic light for a photoperiod comprising a light period and a dark period, wherein each light period and each dark period are each independently at least about 3 minutes, and wherein the monochromatic light comprises a peak wavelength of at least about 550 nm to no greater than about 570 nm; and

hatching the egg, wherein the bird that hatches from the egg has greater muscle weight at about 28 days after hatching compared to a bird that hatches from an egg not exposed to the monochromatic light.

38. (Original) A method for increasing muscle weight in a bird, the method comprising:

exposing an egg to a monochromatic light for a photoperiod comprising a light period and a dark period, wherein each light period and each dark period are each independently at least about 3 minutes, wherein the monochromatic light comprises a peak wavelength of about 560 nm, half band +/- about 15 nm, and wherein the monochromatic light has an intensity of at least about 0.08 watts/m<sup>2</sup> to no greater than about 0.2 watts/m<sup>2</sup>; and

hatching the egg, wherein the bird that hatches from the egg has greater muscle weight at about 28 days after hatching compared to a bird that hatches from an egg not exposed to the monochromatic light.

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39. (Original) A method for decreasing a mortality rate of a bird, the method comprising:  
exposing an egg to a monochromatic light for a photoperiod; and  
hatching the egg, wherein the mortality rate of a bird that hatches from the egg  
has a lower mortality rate compared to a bird that hatches from an egg not exposed to the  
monochromatic light.

40. (Previously Amended) The method of claim 39 wherein the photoperiod comprises a  
light period and a dark photoperiod.

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41. (Original) The method of claim 40 wherein each light period and each dark period are  
each independently at least about 3 minutes.

42. (Original) The method of claim 40 wherein each light period and each dark period are  
each independently at least about 15 minutes.

43. (Original) The method of claim 40 wherein each light period comprises a period of about  
3 to about 15 minutes, and wherein each dark period comprises a period of about 3 to about 15  
minutes.

44. (Original) The method of claim 39 wherein the monochromatic light comprises a peak  
wavelength of at least about 500 nm to no greater than about 590 nm.

45. (Original) The method of claim 39 wherein the monochromatic light comprises a peak  
wavelength of at least about 550 nm to no greater than about 570 nm.

46. (Original) The method of claim 39 wherein the monochromatic light has an intensity of  
at least about 0.001 watts/m<sup>2</sup> to no greater than about 0.2 watts/m<sup>2</sup>.

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47. (Original) The method of claim 39 wherein the egg is a chicken egg or a turkey egg.

48. (Canceled)

49. (Original) A method for decreasing a mortality rate of a bird, the method comprising:  
exposing an egg to a monochromatic light for a photoperiod comprising a light period and a dark period, wherein the monochromatic light comprises a peak wavelength of at least about 550 nm to no greater than about 570 nm; and

hatching the egg, wherein the mortality rate of a bird that hatches from the egg has a lower mortality rate compared to a bird that hatches from an egg not exposed to the monochromatic light.

B) correct  
50. (Original) A method for decreasing a mortality rate of a bird, the method comprising:  
exposing an egg to a monochromatic light for a photoperiod comprising a light period and a dark period, wherein each light period and each dark period are each independently at least about 3 minutes, and wherein the monochromatic light comprises a peak wavelength of at least about 550 nm to no greater than about 570 nm; and

hatching the egg, wherein the mortality rate of a bird that hatches from the egg has a lower mortality rate compared to a bird that hatches from an egg not exposed to the monochromatic light.

51. (Original) A method for decreasing a mortality rate of a bird, the method comprising:  
exposing an egg to a monochromatic light for a photoperiod comprising a light period and a dark period, wherein each light period and each dark period are each independently at least about 3 minutes, and wherein the monochromatic light comprises a peak wavelength of about 560 nm, half band +/- about 15 nm, and wherein the monochromatic light has an intensity of at least about 0.08 watts/m<sup>2</sup> to no greater than about 0.2 watts/m<sup>2</sup>; and



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hatching the egg, wherein the mortality rate of a bird that hatches from the egg has a lower mortality rate compared to a bird that hatches from an egg not exposed to the monochromatic light.

52. (New) A method for exposing an embryo to light, the method comprising exposing an egg to a monochromatic light for a photoperiod comprising a light period and dark period, wherein each light period comprises a period of about 3 to about 15 minutes, and wherein each dark period comprises a period of about 3 to about 15 minutes.

53. (New) The method of claim 52 wherein the monochromatic light comprises a peak wavelength of at least about 500 nanometers (nm) to no greater than about 590 nm.

54. (New) The method of claim 52 wherein the monochromatic light comprises a peak wavelength of at least about 550 nm to no greater than about 570 nm.

55. (New) The method of claim 52 wherein the monochromatic light has an intensity of at least about 0.001 watts/m<sup>2</sup> to no greater than about 0.2 watts/m<sup>2</sup>.

56. (New) The method of claim 52 wherein the egg is a chicken egg or a turkey egg.